

WE CLAIM

1. A wireless telecommunications system for routing data packets and voice calls between a network and a subscriber terminal of the wireless telecommunications system, the subscriber terminal being connectable to a central terminal of the wireless telecommunications system via a radio resource, the wireless telecommunications system providing multiple communication channels arranged to utilise the radio resource for the transmission of signals to and from the subscriber terminal, and a number of said communication channels being formed as a packet group for transmission of data packets to and from the subscriber terminal, the wireless telecommunications system comprising:

a packet controller connectable to the network and arranged to control the transmission of data packets to the subscriber terminal over the communication channels of the packet group;

a plurality of communications units within the subscriber terminal to enable the subscriber terminal to transmit and receive signals over a corresponding plurality of the multiple communication channels;

a subscriber controller within the subscriber terminal arranged, when no voice call is being made, to cause the plurality of communications units to monitor a corresponding plurality of the communication channels of the packet group, the subscriber controller being further arranged to issue a channels message to the packet controller identifying the communication channels within the packet group being monitored;

the subscriber controller being arranged, when a voice call is to be made, to assign one of the plurality of communications units to the voice call, thereby reducing the number of communications units available to monitor the communication channels of the packet group, the subscriber controller being arranged to re-issue the channels message to the packet controller identifying the communication channels within the packet group being monitored.

2. A wireless telecommunications system as claimed in Claim 1, wherein on completion of the voice call, the subscriber controller is arranged to re-assign said one of the plurality of communications units to the monitoring of one of the packet group

communication channels, and to re-issue the channels message to the packet controller identifying the communications channels within the packet group being monitored.

3. A wireless telecommunications system as claimed in Claim 1, wherein upon
5 receipt of each channels message from the subscriber controller, the packet controller is arranged to issue an acknowledgement message to the subscriber controller confirming the communication channels identified in the channels message.

4. A wireless telecommunications system as claimed Claim 1, further comprising:
10 a storage for maintaining a queue associated with each communication channel in the packet group; and
a queue manager arranged to place data packets destined for the subscriber terminal in the queue for one of the communication channels being monitored by the subscriber terminal.

15 5. A wireless telecommunications system as claimed in Claim 4, wherein the packet controller maintains a record for the subscriber terminal identifying the packet group communication channels being monitored by the subscriber terminal, each time the channels message is sent by the subscriber controller, the packet controller being
20 arranged to update that record, and the queue manager being arranged to reference the record when determining in to which queue to place a data packet destined for the subscriber terminal.

6. A wireless telecommunication system as claimed in Claim 5, wherein if the
25 channels message from the subscriber controller specifies a reduced number of communication channels, the packet controller causes the queue manager to review the contents of the queues and to redistribute into an appropriate queue any data packets for the subscriber terminal placed in queues for communications channels no longer being monitored by the subscriber terminal.

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7. A wireless telecommunications system as claimed in Claim 1, wherein the radio resource is one or more frequency channels, and the multiple communication channels are orthogonal channels.

5 8. A wireless telecommunications system as claimed in Claim 1, wherein the plurality of communications units comprises a plurality of modems.

9. A wireless telecommunications system as claimed in Claim 1, wherein the plurality of communications units are sufficient when no voice call is being made to
10 enable the subscriber terminal to monitor every communication channel in the packet group.

10. A wireless telecommunications system as claimed in Claim 1, wherein the packet group is programmable, and information identifying the communication channels
15 forming the packet group is distributed to the subscriber terminal over a broadcast communication channel.

11. A subscriber terminal for a wireless telecommunications system for handling data packets and voice calls transmitted over the wireless telecommunications system between
20 a network and the subscriber terminal, the subscriber terminal being connectable to a central terminal of the wireless telecommunications system via a radio resource, the wireless telecommunications system providing multiple communication channels arranged to utilise the radio resource for the transmission of signals to and from the subscriber terminal, and a number of said communication channels being formed as a
25 packet group for transmission of data packets to and from the subscriber terminal, the subscriber terminal comprising:

a plurality of communications units for transmitting and receiving signals over a corresponding plurality of the multiple communication channels;

a subscriber controller arranged, when no voice call is being made, to cause the
30 plurality of communications units to monitor a corresponding plurality of the communication channels of the packet group, the subscriber controller being further

arranged to issue a channels message identifying the communication channels within the packet group being monitored;

the subscriber controller being arranged, when a voice call is to be made, to assign one of the plurality of communications units to the voice call, thereby reducing the number of communications units available to monitor the communication channels of the packet group, the subscriber controller being arranged to re-issue the channels message identifying the communication channels within the packet group being monitored.

12. A subscriber terminal as claimed in Claim 11, wherein on completion of the voice call, the subscriber controller is arranged to re-assign said one of the plurality of communications units to the monitoring of one of the packet group communication channels, and to re-issue the channels message identifying the communications channels within the packet group being monitored.

13. A method of operating a wireless telecommunications system to route data packets and voice calls between a network and a subscriber terminal of the wireless telecommunications system, the subscriber terminal being connectable to a central terminal of the wireless telecommunications system via a radio resource, the wireless telecommunications system providing multiple communication channels arranged to utilise the radio resource for the transmission of signals to and from the subscriber terminal, and a number of said communication channels being formed as a packet group for transmission of data packets to and from the subscriber terminal, the subscriber terminal having a plurality of communications units to enable the subscriber terminal to transmit and receive signals over a corresponding plurality of the multiple communication channels, the method comprising the steps of:

controlling the transmission of data packets to the subscriber terminal over the communication channels of the packet group;

when no voice call is being made, arranging the plurality of communications units to monitor a corresponding plurality of the communication channels of the packet group, and issuing a channels message identifying the communication channels within the packet group being monitored;

when a voice call is to be made, assigning one of the plurality of communications units to the voice call, thereby reducing the number of communications units available to monitor the communication channels of the packet group, and re-issuing the channels message identifying the communication channels within the packet group being
5 monitored.

14. A computer program operable to configure a wireless telecommunications system to perform a method as claimed in Claim 13.

10 15. A carrier medium comprising a computer program as claimed in Claim 14.